

Re-run

RAW SEQUENCE LISTING

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Application Serial Number: 10/019,368
Source: PCT
Date Processed by STIC: 08/5/2005

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PCT

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/019,368

DATE: 08/05/2005

TIME: 10:59:47

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\08042005\J019368.raw

4 <110> APPLICANT: Dean, Nicholas M.
5 ISIS PHARMACEUTICALS, INC.
7 <120> TITLE OF INVENTION: Antisense Oligonucleotide Modulation of Human Protein
8 Kinase C-delta Expression
10 <130> FILE REFERENCE: ISPH-0458
C--> 12 <140> CURRENT APPLICATION NUMBER: US/10/019,368
C--> 12 <141> CURRENT FILING DATE: 2001-11-13
12 <150> PRIOR APPLICATION NUMBER: US 09/313,930
13 <151> PRIOR FILING DATE: 1999-05-18
16 <160> NUMBER OF SEQ ID NOS: 20
18 <170> SOFTWARE: PatentIn Ver. 2.0
20 <210> SEQ ID NO: 1
21 <211> LENGTH: 2104
22 <212> TYPE: DNA
23 <213> ORGANISM: Homo sapiens
25 <220> FEATURE:
26 <221> NAME/KEY: CDS
27 <222> LOCATION: (59)..(2089)
29 <300> PUBLICATION INFORMATION:
30 <301> AUTHORS: Aris, J . P.
31 Basta, P. V.
32 Holmes, W. D.
33 Ballas, L. M.
34 Moomaw, C.
35 Rankl, N. B.
36 Blöbel, G.
37 Loomis, C. R.
38 Burns, D. J.
39 <302> TITLE: Molecular and biochemical characterization of a
40 recombinant human PKC-delta family member
41 <303> JOURNAL: Biochim. Biophys. Acta
42 <304> VOLUME: 1174
43 <305> ISSUE: 2
44 <306> PAGES: 171-181
45 <307> DATE: 1993-08-19
46 <308> DATABASE ACCESSION NO: L07860
47 <309> DATABASE ENTRY DATE: 1993-11-02
49 <400> SEQUENCE: 1
50 tgcgcgcgcg acccttggcg cctgcccctg caacgggagc cccactgcag gcccacc 58
52 atg gcg cgc ttc ctg cgc atc gcc ttc aac tcc tat gag ctg ggc tcc 106
53 Met Ala Pro Phe Leu Arg Ile Ala Phe Asn Ser Tyr Glu Leu Gly Ser
54 1 5 10 15
56 ctg cag gcc gag gac gag gcg aac cag ccc ttc tgt gcc gtg aag atg 154

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57  Leu Gln Ala Glu Asp Glu Ala Asn Gln Pro Phe Cys Ala Val Lys Met
58              20              25              30
60  aag gag gcg ctc agc aca gag cgt ggg aaa aca ctg gtg cag aag aag 202
61  Lys Glu Ala Leu Ser Thr Glu Arg Gly Lys Thr Leu Val Gln Lys Lys
62              35              40              45
64  ccg acc atg tat cct gag tgg aag tcg acg ttc gat gcc cac atc tat 250
65  Pro Thr Met Tyr Pro Glu Trp Lys Ser Thr Phe Asp Ala His Ile Tyr
66              50              55              60
68  gag ggg cgc gtc atc cag att gtg cta atg cgg gca gca gag gag cca 298
69  Glu Gly Arg Val Ile Gln Ile Val Leu Met Arg Ala Ala Glu Glu Pro
70              65              70              75              80
72  gtg tct gag gtg acc gtg ggt gtg tcg gtg ctg gcc gag cgc tgc aag 346
73  Val Ser Glu Val Thr Val Gly Val Ser Val Leu Ala Glu Arg Cys Lys
74              85              90              95
76  aag aac aat ggc aag gct gag ttc tgg ctg gac ctg cag cct cag gcc 394
77  Lys Asn Asn Gly Lys Ala Glu Phe Trp Leu Asp Leu Gln Pro Gln Ala
78              100              105              110
80  aag gtg ttg atg tct gtt cag tat ttc ctg gag gac gtg gat tgc aaa 442
81  Lys Val Leu Met Ser Val Gln Tyr Phe Leu Glu Asp Val Asp Cys Lys
82              115              120              125
84  caa tct atg cgc agt gag gac gag gcc aag ttc cca acg atg aac cgc 490
85  Gln Ser Met Arg Ser Glu Asp Glu Ala Lys Phe Pro Thr Met Asn Arg
86              130              135              140
88  cgc gga gcc atc aaa cag gcc aaa atc cac tac atc aag aac cat gag 538
89  Arg Gly Ala Ile Lys Gln Ala Lys Ile His Tyr Ile Lys Asn His Glu
90              145              150              155              160
92  ttt atc gcc acc ttc ttt ggg caa ccc acc ttc tgt tct gtg tgc aaa 586
93  Phe Ile Ala Thr Phe Phe Gly Gln Pro Thr Phe Cys Ser Val Cys Lys
94              165              170              175
96  gac ttt gtc tgg ggc ctc aac aag caa ggc tac aaa tgc agg caa tgt 634
97  Asp Phe Val Trp Gly Leu Asn Lys Gln Gly Tyr Lys Cys Arg Gln Cys
98              180              185              190
100  aac gct gcc atc cac aag aaa tgc atc gac aag atc atc gcc aga tgc 682
101  Asn Ala Ala Ile His Lys Lys Cys Ile Asp Lys Ile Ile Gly Arg Cys
102              195              200              205
104  act ggc acc gcg gcc aac agc cgg gac act ata ttc cag aaa gaa cgc 730
105  Thr Gly Thr Ala Ala Asn Ser Arg Asp Thr Ile Phe Gln Lys Glu Arg
106              210              215              220
108  ttc aac atc gac atg ccg cac cgc ttc aag gtt cac aac tac atg agc 778
109  Phe Asn Ile Asp Met Pro His Arg Phe Lys Val His Asn Tyr Met Ser
110              225              230              235              240
112  ccc acc ttc tgt gac cac tgc ggc agc ctg ctc tgg gga ctg gtg aag 826
113  Pro Thr Phe Cys Asp His Cys Gly Ser Leu Leu Trp Gly Leu Val Lys
114              245              250              255
116  cag gga tta aag tgt gaa gac tgc ggc atg aat gtg cac cat aaa tgc 874
117  Gln Gly Leu Lys Cys Glu Asp Cys Gly Met Asn Val His His Lys Cys
118              260              265              270
120  cgg gag aag gtg gcc aac ctc tgc ggc atc aac cag aag ctt ttg gct 922
121  Arg Glu Lys Val Ala Asn Leu Cys Gly Ile Asn Gln Lys Leu Leu Ala

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122          275          280          285
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125   Glu Ala Leu Asn Gln Val Thr Gln Arg Ala Ser Arg Arg Ser Asp Ser
126          290          295          300
128   gcc tcc tca gag cct gtt ggg ata tat cag ggt ttc gag aag aag acc   1018
129   Ala Ser Ser Glu Pro Val Gly Ile Tyr Gln Gly Phe Glu Lys Lys Thr
130          305          310          315          320
132   gga gtt gct ggg gag gac atg caa gac aac agt ggg acc tac ggc aag   1066
133   Gly Val Ala Gly Glu Asp Met Gln Asp Asn Ser Gly Thr Tyr Gly Lys
134          325          330          335
136   atc tgg gag ggc agc agc aag tgc aac atc aac aac ttc atc ttc cac   1114
137   Ile Trp Glu Gly Ser Ser Lys Cys Asn Ile Asn Asn Phe Ile Phe His
138          340          345          350
140   aag gtc ctg ggc aaa ggc agc ttc ggg aag gtg ctg ctt gga gag ctg   1162
141   Lys Val Leu Gly Lys Gly Ser Phe Gly Lys Val Leu Leu Gly Glu Leu
142          355          360          365
144   aag ggc aga gga gag tac tct gcc atc aag gcc ctc aag aag gat gtg   1210
145   Lys Gly Arg Gly Glu Tyr Ser Ala Ile Lys Ala Leu Lys Lys Asp Val
146          370          375          380
148   gtc ctg atc gac gac gac gtg gag tgc acc atg gtt gag aag cgg gtg   1258
149   Val Leu Ile Asp Asp Asp Val Glu Cys Thr Met Val Glu Lys Arg Val
150          385          390          395          400
152   ctg aca ctt gcc gca gag aat ccc ttt ctc acc cac ctc atc tgc acc   1306
153   Leu Thr Leu Ala Ala Glu Asn Pro Phe Leu Thr His Leu Ile Cys Thr
154          405          410          415
156   ttc cag acc aag gac cac ctg ttc ttt gtg atg gag ttc ctc aac ggg   1354
157   Phe Gln Thr Lys Asp His Leu Phe Phe Val Met Glu Phe Leu Asn Gly
158          420          425          430
160   ggg gac ctg atg tac cac atc cag gac aaa ggc cgc ttt gaa ctc tac   1402
161   Gly Asp Leu Met Tyr His Ile Gln Asp Lys Gly Arg Phe Glu Leu Tyr
162          435          440          445
164   cgt gcc acg ttt tat gcc gct gag ata atg tgt gga ctg cag ttt cta   1450
165   Arg Ala Thr Phe Tyr Ala Ala Glu Ile Met Cys Gly Leu Gln Phe Leu
166          450          455          460
168   cac agc aag ggc atc att tac agg gac ctc aaa ctg gac aat gtg ctg   1498
169   His Ser Lys Gly Ile Ile Tyr Arg Asp Leu Lys Leu Asp Asn Val Leu
170          465          470          475          480
172   ttg gac cgg gat ggc cac atc aag att gcc gac ttt ggg atg tgc aaa   1546
173   Leu Asp Arg Asp Gly His Ile Lys Ile Ala Asp Phe Gly Met Cys Lys
174          485          490          495
176   gag aac ata ttc ggg gag agc cgg gcc agc acc ttc tgc ggc acc cct   1594
177   Glu Asn Ile Phe Gly Glu Ser Arg Ala Ser Thr Phe Cys Gly Thr Pro
178          500          505          510
180   gac tat atc gcc cct gag atc cta cag ggc ctg aag tac aca ttc tct   1642
181   Asp Tyr Ile Ala Pro Glu Ile Leu Gln Gly Leu Lys Tyr Thr Phe Ser
182          515          520          525
184   gtg gac tgg tgg tct ttc ggg gtc ctt ctg tac gag atg ctc att ggc   1690
185   Val Asp Trp Trp Ser Phe Gly Val Leu Leu Tyr Glu Met Leu Ile Gly
186          530          535          540

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188  cag tcc ccc ttc cat ggt gat gat gag gat gaa ctc ttc gag tcc atc 1738
189  Gln Ser Pro Phe His Gly Asp Asp Glu Asp Glu Leu Phe Glu Ser Ile
190  545 550 555 560
192  cgt gtg gac acg cca cat tat ccc cgc tgg atc acc aag gag tcc aag 1786
193  Arg Val Asp Thr Pro His Tyr Pro Arg Trp Ile Thr Lys Glu Ser Lys
194  565 570 575
196  gac atc ctg gag aag ctc ttt gaa agg gaa cca acc aag agg ctg gga 1834
197  Asp Ile Leu Glu Lys Leu Phe Glu Arg Glu Pro Thr Lys Arg Leu Gly
198  580 585 590
200  atg acg gga aac atc aaa atc cac ccc ttc ttc aag acc ata aac tgg 1882
201  Met Thr Gly Asn Ile Lys Ile His Pro Phe Phe Lys Thr Ile Asn Trp
202  595 600 605
204  act ctg ctg gaa aag cgg agg ttg gag cca ccc ttc agg ccc aaa gtg 1930
205  Thr Leu Leu Glu Lys Arg Arg Leu Glu Pro Pro Phe Arg Pro Lys Val
206  610 615 620
208  aag tca ccc aga gac tac agt aac ttt gac cag gag ttc ctg aac gag 1978
209  Lys Ser Pro Arg Asp Tyr Ser Asn Phe Asp Gln Glu Phe Leu Asn Glu
210  625 630 635 640
212  aag gcg cgc ctc tcc tac agc gac aag aac ctc atc gac tcc atg gac 2026
213  Lys Ala Arg Leu Ser Tyr Ser Asp Lys Asn Leu Ile Asp Ser Met Asp
214  645 650 655
216  cag tct gca ttc gct ggc ttc tcc ttt gtg aac ccc aaa ttc gag cac 2074
217  Gln Ser Ala Phe Ala Gly Phe Ser Phe Val Asn Pro Lys Phe Glu His
218  660 665 670
220  ctc ctg gaa gat tga ggttcctgga cagat 2104
221  Leu Leu Glu Asp
222  675
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227 <212> TYPE: PRT
228 <213> ORGANISM: Homo sapiens
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237  Lys Glu Ala Leu Ser Thr Glu Arg Gly Lys Thr Leu Val Gln Lys Lys
238  35 40 45
240  Pro Thr Met Tyr Pro Glu Trp Lys Ser Thr Phe Asp Ala His Ile Tyr
241  50 55 60
243  Glu Gly Arg Val Ile Gln Ile Val Leu Met Arg Ala Ala Glu Glu Pro
244  65 70 75 80
246  Val Ser Glu Val Thr Val Gly Val Ser Val Leu Ala Glu Arg Cys Lys
247  85 90 95
249  Lys Asn Asn Gly Lys Ala Glu Phe Trp Leu Asp Leu Gln Pro Gln Ala
250  100 105 110
252  Lys Val Leu Met Ser Val Gln Tyr Phe Leu Glu Asp Val Asp Cys Lys
253  115 120 125
255  Gln Ser Met Arg Ser Glu Asp Glu Ala Lys Phe Pro Thr Met Asn Arg

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256	130	135	140
258	Arg Gly Ala Ile Lys Gln Ala Lys Ile His Tyr Ile Lys Asn His Glu		
259	145	150	155
261	Phe Ile Ala Thr Phe Phe Gly Gln Pro Thr Phe Cys Ser Val Cys Lys		160
262	165	170	175
264	Asp Phe Val Trp Gly Leu Asn Lys Gln Gly Tyr Lys Cys Arg Gln Cys		
265	180	185	190
267	Asn Ala Ala Ile His Lys Lys Cys Ile Asp Lys Ile Ile Gly Arg Cys		
268	195	200	205
270	Thr Gly Thr Ala Ala Asn Ser Arg Asp Thr Ile Phe Gln Lys Glu Arg		
271	210	215	220
273	Phe Asn Ile Asp Met Pro His Arg Phe Lys Val His Asn Tyr Met Ser		
274	225	230	235
276	Pro Thr Phe Cys Asp His Cys Gly Ser Leu Leu Trp Gly Leu Val Lys		240
277	245	250	255
279	Gln Gly Leu Lys Cys Glu Asp Cys Gly Met Asn Val His His Lys Cys		
280	260	265	270
282	Arg Glu Lys Val Ala Asn Leu Cys Gly Ile Asn Gln Lys Leu Leu Ala		
283	275	280	285
285	Glu Ala Leu Asn Gln Val Thr Gln Arg Ala Ser Arg Arg Ser Asp Ser		
286	290	295	300
288	Ala Ser Ser Glu Pro Val Gly Ile Tyr Gln Gly Phe Glu Lys Lys Thr		
289	305	310	315
291	Gly Val Ala Gly Glu Asp Met Gln Asp Asn Ser Gly Thr Tyr Gly Lys		
292	325	330	335
294	Ile Trp Glu Gly Ser Ser Lys Cys Asn Ile Asn Asn Phe Ile Phe His		
295	340	345	350
297	Lys Val Leu Gly Lys Gly Ser Phe Gly Lys Val Leu Leu Gly Glu Leu		
298	355	360	365
300	Lys Gly Arg Gly Glu Tyr Ser Ala Ile Lys Ala Leu Lys Lys Asp Val		
301	370	375	380
303	Val Leu Ile Asp Asp Asp Val Glu Cys Thr Met Val Glu Lys Arg Val		
304	385	390	395
306	Leu Thr Leu Ala Ala Glu Asn Pro Phe Leu Thr His Leu Ile Cys Thr		400
307	405	410	415
309	Phe Gln Thr Lys Asp His Leu Phe Phe Val Met Glu Phe Leu Asn Gly		
310	420	425	430
312	Gly Asp Leu Met Tyr His Ile Gln Asp Lys Gly Arg Phe Glu Leu Tyr		
313	435	440	445
315	Arg Ala Thr Phe Tyr Ala Ala Glu Ile Met Cys Gly Leu Gln Phe Leu		
316	450	455	460
318	His Ser Lys Gly Ile Ile Tyr Arg Asp Leu Lys Leu Asp Asn Val Leu		
319	465	470	475
321	Leu Asp Arg Asp Gly His Ile Lys Ile Ala Asp Phe Gly Met Cys Lys		
322	485	490	495
324	Glu Asn Ile Phe Gly Glu Ser Arg Ala Ser Thr Phe Cys Gly Thr Pro		
325	500	505	510
327	Asp Tyr Ile Ala Pro Glu Ile Leu Gln Gly Leu Lys Tyr Thr Phe Ser		
328	515	520	525

VERIFICATION SUMMARY

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Input Set : A:\PTO.AMC.txt

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L:12 M:270 C: Current Application Number differs, Replaced Current Application No

L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date